

ILLUSTRATED REVIEW

The Journey to a Successful Illustrated Review

Sarah Nersesian MSc¹  | Michelle Sholzberg MDCM, MSc²   |
Mary Cushman MD³  | Alisa S. Wolberg PhD⁴  

¹Microbiology and Immunology, Dalhousie University, Halifax, Nova Scotia, Canada

²St Michael's Hospital, Departments of Medicine and Laboratory Medicine & Pathobiology, Li Ka Shing Knowledge Institute, University of Toronto, Toronto, Ontario, Canada

³Department Medicine, Robert Larner MD College of Medicine, Burlington, Vermont, USA

⁴Pathology and Laboratory Medicine and UNC Blood Research Center, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA

Correspondence

Michelle Sholzberg, St Michael's Hospital Departments of Medicine and Laboratory Medicine & Pathobiology, 30 Bond Street, Toronto, ON M5B1W8, Canada.
Email: Michelle.Sholzberg@unityhealth.to

Funding information

There was no funding support for this article.

Handling Editor: Prof. Yotis Senis

Abstract

Illustrated review articles, rooted in scientific rigor, are made up of “capsules” or panels of visuals that together provide an up-to-date overview of a topic. Illustrated reviews aim to provide a more accessible format than traditional written reviews to facilitate more effective knowledge translation and dissemination. However, the novelty of this format can dissuade prospective authors due to uncertainty and lack of comfort. To remedy this uncertainty, we have summarized the journey of developing an illustrated review, from identifying an appropriate topic to submitting the final manuscript for peer review. We highlight the importance of approaching an illustrated review from a storytelling perspective, and encouraging authors to keep their audience in mind when picking a theme or characters. We provide storyboard considerations and simplify graphic design principles to develop an outline and line draft for the illustrated review. We list programs available to authors to demystify creating attractive and engaging scientific visuals. Finally, we provide information on choosing colors or fonts and where to find copyright-free icons, graphics, illustrations, and pictures. This review provides prospective authors with the knowledge, tools, and resources to create an effective illustrated review article. If there is difficulty with the links embedded within the document please download the full PDF.

KEYWORDS

graphics, hemostasis, illustration, publishing, thrombosis, visualization

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial-NoDerivs](https://creativecommons.org/licenses/by-nc-nd/4.0/) License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2022 The Authors. *Research and Practice in Thrombosis and Haemostasis* published by Wiley Periodicals LLC on behalf of International Society on Thrombosis and Haemostasis (ISTH).

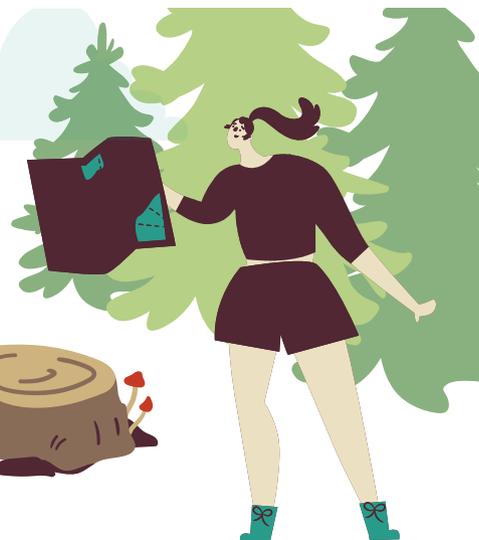
ILLUSTRATED REVIEWS



"CAPSULES" OF INFORMATION¹

using visuals like a comic book or graphical novel

FOR AUTHORS



USING VISUALS MAKE THEM

ATTRACTIVE²

Visuals can peak interest, helping it stand out from other work.

ENGAGING

Visuals help keep readers interested in the information.

ACCESSIBLE

Making science more accessible by distilling complex concepts.

MEMORABLE³

Visual communication is more memorable than written.

SHAREABLE

Easily shareable in both academic and online scenarios.



PITCH YOUR IDEA

IT'S A GOOD IDEA FOR AN ILLUSTRATED REVIEW IF

IT HAS NOT BEEN REVIEWED RECENTLY

Ensure the topic has not been reviewed recently or published as an illustrated review with RPTH.

RPTH ILLUSTRATED REVIEWS 1-3

IT'S A COMPLEX TOPIC

A topic in thrombosis and hemostasis warranting review.

IT'S BETTER EXPLAINED WITH GRAPHICS

The topic can be explained, distilled, and simplified with graphics.

YOU ARE OPEN MINDED

You are interested in trying something new!

EMAIL YOUR PITCH

MAIL TO: ILLUSTRATED MATERIALS EDITOR



DEVELOP YOUR STORY

APPROACH FROM A STORYTELLING PERSPECTIVE¹⁻³

ensure your story has a beginning, middle, and end



LAY OUT YOUR PANELS

THE OUTLINE OF YOUR STORY

create your panels (7 x 9.5") and fill them with placeholders

STORYBOARDING IN SCIENCE!

EACH PANEL SHOULD HAVE A GOAL

How does each panel fit in the story? Write the goal out for each panel.

INTRODUCE CONCEPTS

Make sure each basic concept is introduced before building on it.

WHAT TO INCLUDE IN EACH PANEL

List the main components required for the communication goal.

COMPONENTS

Reference images for how the concept is usually depicted.

EXISTING GRAPHICS

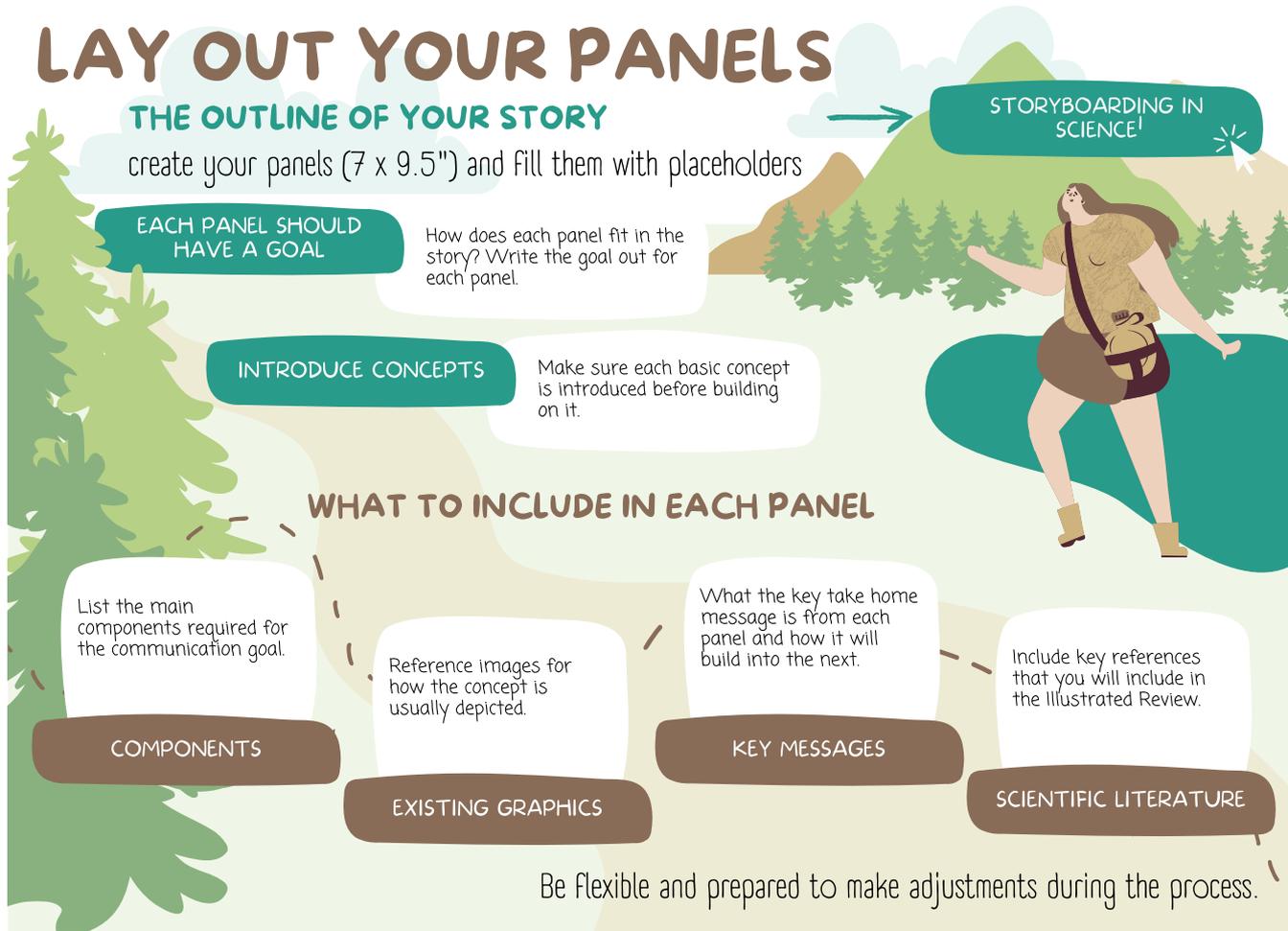
What the key take home message is from each panel and how it will build into the next.

KEY MESSAGES

Include key references that you will include in the Illustrated Review.

SCIENTIFIC LITERATURE

Be flexible and prepared to make adjustments during the process.



ORGANIZE YOUR CONTENT

FOLLOW GRAPHIC DESIGN PRINCIPLES

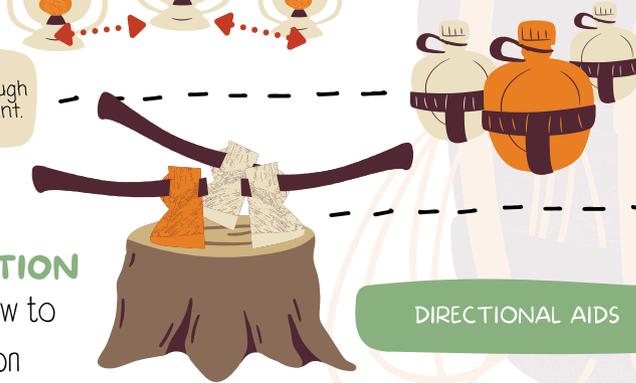
ALIGNMENT

Make sure components line up.



CONTRAST

To help guide the reader through and highlight what's important.



BALANCE

Distribute content evenly.

CONSISTENCY

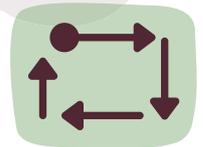
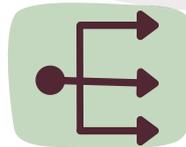
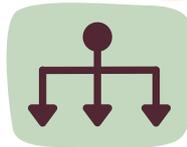
Methods of contrast should stay the same throughout.

SHOWING DIRECTION

panels should have a flow to them to provide direction

DIRECTIONAL AIDS

Use headers, numbers, connectors, arrows, boxes, or color gradients to help guide.



SET THE STAGE

START WITH A DRAFT

CREATE A LINE DRAFT

Create a rough sketch of what you want where in each panel.

EMAIL YOUR OUTLINE

Receive feedback from the editor and an informal expert reviewer on the outline.

CHOOSE A PROGRAM

ADOBE SUITE

Vector + Creation-based Desktop App

CANVA

Pixel or Vector + Drag and Drop Online Tool

BIORENDER

Pixel + Drag and Drop Online Tool

POWERPOINT

Pixel + Creation-based Desktop App

INKSCAPE

Vector + Creation-based Desktop App

VECTOR VS PIXEL

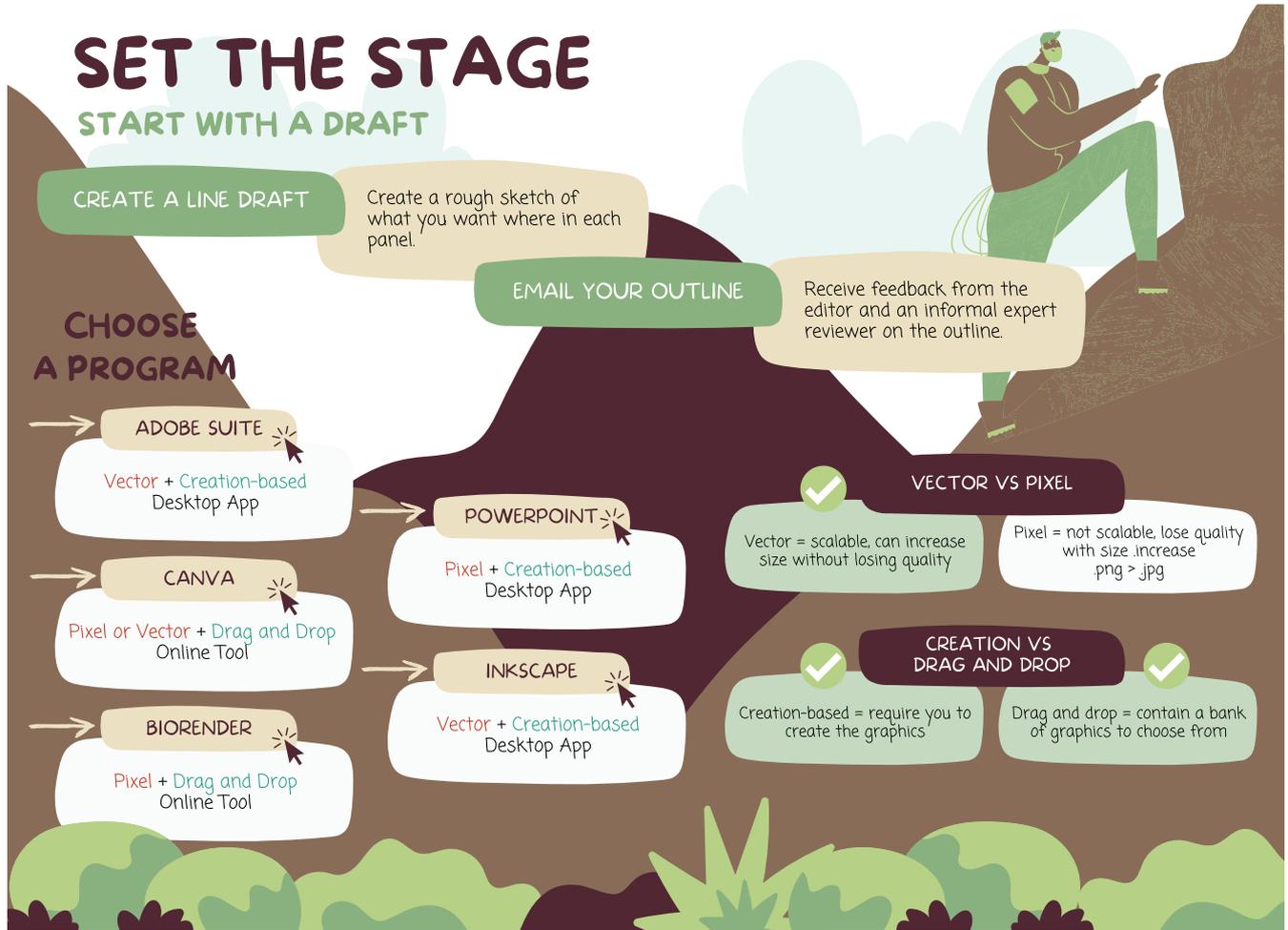
✓ Vector = scalable, can increase size without losing quality

Pixel = not scalable, lose quality with size increase
 png > jpg

CREATION VS DRAG AND DROP

✓ Creation-based = require you to create the graphics

✓ Drag and drop = contain a bank of graphics to choose from



STYLIZE YOUR CONTENT

DEVELOP A COLOR SCHEME

MAIN COLOR

Pick a physiologically representative main color.

PALETTE

Build a palette with a light/ dark background, and a few highlight colors.

ADOBE COLOR WHEEL

CONTRAST CHECKER

CHOOSE A SANS SERIF FONT

SANS SERIF

for example:

Arial

Seems more modern
Easier to recognize
More readable
Accessible

SERIF

for example:

Times

Seems more professional
Harder to recognize
Less readable
Not accessible

GOOGLE FONTS

REPLACE PLACEHOLDERS WITH VISUALS using the simplest form that matches your style



ICONS

THE NOUN PROJECT

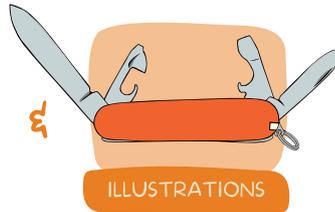
PHYLOPIC



GRAPHICS

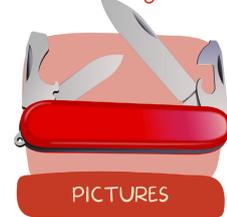
SERVIER ART

BIOICONS



ILLUSTRATIONS

PUBLIC HEALTH IMAGE LIBRARY



PICTURES

MED PIX

& confirm the copyright status of any borrowed visual.

PILOT AND PEER REVIEW

PILOT WITH YOUR AUDIENCE



SIMPLIFY WHERE YOU CAN

SUBMIT FOR
PEER REVIEW

RELATIONSHIP DISCLOSURE

Dr Cushman is editor-in-chief and Dr. Sholzberg is an associate editor of *Research and Practice in Thrombosis and Haemostasis (RPTH)*, and they receive honoraria. Sarah Nersesian is the owner of and a scientific illustrator at Designs That Cell.

AUTHOR CONTRIBUTIONS

SN and MS contributed to conceptualizing, writing, and designing article content. MC and AW contributed to conception and design and reviewed drafts of the work and the final article.

ORCID

Michelle Sholzberg  <https://orcid.org/0000-0003-1220-0301>

Alisa S. Wolberg  <https://orcid.org/0000-0002-2845-2303>

TWITTER

Sarah Nersesian  @NersesianSarah

Michelle Sholzberg  @sholzberg

Mary Cushman  @MaryCushmanMD

Alisa S. Wolberg  @aswolberg

REFERENCES

1. Wolberg AS, Cushman M. Illustrated review article: a new format for disseminating scientific progress. *Res Pract Thromb Haemost.* 2018;2(3):405-406. doi:[10.1002/rth2.12124](https://doi.org/10.1002/rth2.12124)
2. Ward CM, Andrews RK. Short and sweet science. *Res Pract Thromb Haemost.* 2019;3(3):429-430. doi:[10.1002/rth2.12224](https://doi.org/10.1002/rth2.12224)
3. Bobek E, Tversky B. Creating visual explanations improves learning. *Cogn Res Princ Implic.* 2016;1(1):27. doi:[10.1186/s41235-016-0031-6](https://doi.org/10.1186/s41235-016-0031-6)
4. Samuelson Bannow B, McLintock C, James P. Menstruation, anticoagulation, and contraception: VTE and uterine bleeding. *Res Pract Thromb Haemost.* 2021;5(5):e12570. doi:[10.1002/rth2.12570](https://doi.org/10.1002/rth2.12570)
5. Relke N, Chornenki NLJ, Sholzberg M. Tranexamic acid evidence and controversies: an illustrated review. *Res Pract Thromb Haemost.* 2021;5(5):e12546. doi:[10.1002/rth2.12546](https://doi.org/10.1002/rth2.12546)
6. Boon G, Bogaard HJ, Klok FA. Essential aspects of the follow-up after acute pulmonary embolism: an illustrated review. *Res Pract Thromb Haemost.* 2020;4(6):958-968. doi:[10.1002/rth2.12404](https://doi.org/10.1002/rth2.12404)
7. Joubert M, Davis L, Metcalfe J. Storytelling: the soul of science communication. *J Sci Commun.* 2019;18(05):E. doi:[10.22323/2.18050501](https://doi.org/10.22323/2.18050501)
8. Ettinger J, Otto FEL, Schipper ELF. Storytelling can be a powerful tool for science. *Nature.* 2021;589(7842):352. doi:[10.1038/d41586-021-00108-w](https://doi.org/10.1038/d41586-021-00108-w)
9. Martinez-Conde S, Macknik SL. Opinion: finding the plot in science storytelling in hopes of enhancing science communication. *Proc Natl Acad Sci U S A.* 2017;114(31):8127-8129. doi:[10.1073/pnas.1711790114](https://doi.org/10.1073/pnas.1711790114)
10. Ettinger J. What Hollywood can teach researchers about scientific storytelling. *Nature.* 2020. doi:[10.1038/d41586-020-01731-9](https://doi.org/10.1038/d41586-020-01731-9)

How to cite this article: Nersesian S, Sholzberg M, Cushman M, Wolberg AS. The Journey to a Successful Illustrated Review. *Res Pract Thromb Haemost.* 2022;6:e12721. doi:[10.1002/rth2.12721](https://doi.org/10.1002/rth2.12721)